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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/511,158	02/23/2000	Hidekazu Nakamoto	500.36898VXI	4119

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EXAMINER

LEUNG, JENNIFER A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/511,158

Applicant(s)

NAKAMOTO ET AL.

Examiner

Jennifer A. Lung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-7 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/242,903.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed on April 14, 2003 has been received and carefully considered. The changes submitted to the Specification are acceptable. Claims 3-5 are withdrawn from consideration. Claims 6-7 have been added. Claims 1-2 and 6-7 remain active.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 2 (lines 12-13) and claim 7 (lines 11-12), it is unclear as to the relationship between, "the support member positioned at side of the outlet" and the plural "support members at both ends thereof" set forth in claim 2 (line 6) and claim 7 (line 5). Likewise, "the support member" of claim 2 (line 14) and claim 7 (line 13).

With respect to claim 6 (lines 14-15) and claim 7 (lines 14-15), it is unclear as to the structural limitation applicants are attempting to recite by, "the stirring rotor... is divided into a plurality of stirring blocks according to the viscosity level of the liquid feed."

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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3. Claims 1-2 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schnock et al. (U.S. 3,591,344).

With respect to claims 1 and 2, Schnock et al. (column 4, line 64 to column 5, line 36) disclose an apparatus comprising:

- (a) a substantially horizontal cylindrical vessel (FIG. 1) provided with an inlet **1** at a lower part at one end thereof, an outlet **7** at the lower part at the other end thereof, and an outlet **6** at the upper part thereof; and
- (b) a stirring rotor (i.e., comprising hubs **8**, **9**) provided with support members (i.e., disks **41**, **42**) at an end of the inlet side and an end of the outlet side thereof, respectively (column 5, lines 6-7); and a plurality of hollow disks **4** (FIG. 4a-4e) as connected to one another in the longitudinal direction thereof within the cylindrical vessel;

wherein the apparatus further comprises scraping plates (i.e., drag elements **2**; FIG. 1, 2a-2f) each between adjacent hollow disks **4**; the stirring rotor being without any rotating shaft at the position of a rotating center axis (column 5, lines 34-35); and comprising scraping vanes **2** on the support members **41**, **42** on the vessel inner end wall-facing side (see FIG. 1).

Although Schnock et al. do not specifically disclose, "the outer diameter of the support members **41**, **42** being smaller than the outer diameter of the stirring rotor," Schnock et al. further teach that the disks "may be of different shape, as shown in FIG. 4d where angular disks alternate with disks of smaller outer diameter," (column 5, lines 28-32). Therefore, it would have been an obvious design choice for one of ordinary skill in the art at the time the invention was made to select an appropriate outer diameter for the support members **41**, **42** in the apparatus of Schnock et al., on the basis of suitability for the intended use, and in any event, it has been held

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that changes in size involve only ordinary skill in the art. *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 1955).

With respect to claims 6 and 7, the same comments with respect to Schnock et al. apply. Additionally, Schnock et al. disclose the stirring rotor may be divided into a plurality of “stirring blocks” (i.e., disks 4 of differing configurations, as illustrated in FIG. 4a-4e; column 5, lines 22-32). In the Specification, page 21, line 4 to page 22, line 11, it appears that applicants define the “stirring blocks” to comprise the plurality of hollow disks located between the support members, wherein the disks of a given “block” comprise differing configurations. Therefore, disks 4 of Schnock et al., comprising differing configurations, meets the claims.

#### ***Double Patenting***

4. Claims 1-2 and 6-7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-11 of U.S. Patent No. 6,096,838 in view of Schnock et al. (U.S. 3,591,344).

With respect to claims 1-2 and 6-7, reference claims 10-11 of U.S. '838 claim substantially the invention as instantly claimed, namely an apparatus comprising: a substantially horizontal cylindrical vessel, a stirring rotor having a plurality of hollow disks connected to one another in the longitudinal direction, and scraping plates between adjacent hollow disks, wherein the stirring rotor is without any rotating shaft at the position of a rotating center axis. Although U.S. '838 does not specifically claim the recited “support members” of the instant invention, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide support members to the claimed apparatus of U.S. '838, because it is well known in the art that support members are inherent of any stirring rotor, and furthermore, a support

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member comprising the recited structural elements is conventionally known in the art, as evidenced by Schnock et al. The same comments with respect to Schnock et al. above apply.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-2 and 6-7 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

\* \* \*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is 703-305-4951. The examiner can normally be reached on 8:30 am - 5:30 pm M-F, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, Glenn A. Caldarola can be reached on 703-308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jennifer A. Leung  
June 20, 2003 *JAL*

*Hien Tran*

**HIEN TRAN  
PRIMARY EXAMINER**